REMARKS

In the Office Action of April 5, 2005, claims 1-20 were rejected, and claims 21-30 were withdrawn from consideration. In this response, claim 1 has been amended, and claims 2, 3, 8, 9, 10 and 18 have been cancelled. Claims 1, 4-7, 11-17 and 19-20 remain pending in the application.

35 U.S.C § 112 First Paragraph Objection and Rejection

The Examiner has objected to the specification under 35 U.S.C. 112, first paragraph, as failing to adequately teach how to make and/or use the claimed invention, and how to achieve the equation related to the minimum weight average molecular weight. The Examiner has rejected at least claim 1 under 35 U.S.C. 112, first paragraph, for the reasons set forth in the objection to the specification. Claim 1 has been amended and instead of an equation, a useful composition range and a useful minimum molecular weight value is provided above which the polymers of the instant invention were found to possess surprising physical properties. Thus, the objection, and the consequent rejection have been overcome. The Applicants respectfully urge that especially as amended, claim 1 is amply supported by the specification and withstands any challenge under 35 U.S.C. 112, first paragraph. The Applicants thus request that the rejection of claim 1 under 35 U.S.C. 112, first paragraph be withdrawn.

35 U.S.C. § 103(a) Rejections

Claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,814,419 (hereinafter referred to as "the Cotter reference"), or GB 1264900, or Keitoku et al in J. Polym. Sci.: Part A: Polym. Chem., Vol. 32, 317-322 (1994) (hereinafter referred to as "the Keitoku reference"), or US Patent 6,228,970 (hereinafter referred to as "the Savariar reference").

The Cotter reference discloses a composition comprising a polyaryl ether containing recurring units of the formula: -O-E-O-E' wherein E' is derived from 4,4'-dichlorodiphenyl sulfone, and E is selected from the group of tetramethylbisphenol A,

admixed with up to 50 mole% of a second diphenol such as biphenol. There is no teaching or suggestion in the Cotter reference of the unique polyethersulfone compositions of the claimed invention, said polyethersulfone compositions comprising structural units derived from a monomer mixture comprising bisphenol A and 4,4'-biphenol, said monomer mixture comprising an amount of 4,4'-biphenol corresponding to from about 70 mole percent to about 80 mole percent 4,4'-biphenol based on total moles of diphenolic monomers present in said monomer mixture, and wherein the polyethersulfone composition has a minimum weight average molecular weight (M_w) of 54,000. The data in Table 1 of the instant application clearly indicate the uniqueness of the polyethersulfone compositions of the present invention compared to compositions falling outside of the compositional and molecular weight parameters defined in amended claim 1. The data show unexpected advantages are observed when the polyethersulfone composition comprises structural units derived from both bisphenol A and 4,4'-diphenol, wherein the structural units derived from 4,4'-diphenol account for at least about 70 mole percent but no more than about 80 mole percent of the total moles of structural units present in the composition which were derived from a diphenol. Further, the polyethersulfone compositions of the instant invention are described as having minimum weight average molecular weight (M_w) of 54,000, also a limitation amply supported by the Applicants' data.

GB 1264900 discloses in Example 2 a polyethersulfone composition comprising structural units derived from bisphenol A; 4,4'-biphenol (p,p'-biphenol) and 4,4'-dichlorodiphenyl sulfone. While such a composition is related to the compositions of the instant invention, it neither discloses nor suggests the unique physical properties of the compositions of the instant invention and in no way suggests the combination of compositional (70-80 mole percent 4,4'biphenol) and molecular weight (M_w of at least 54,000) requirements which control the emergence of these unique physical properties. Here again, the data in the Applicants' Table 1 clearly indicates that it is a specific combination of polymer composition and molecular weight which confers unique physical properties upon such compositions. GB 1264900 neither discloses nor suggests the unique combination of polymer composition and molecular weight which underlies the instant invention.

The Keitoku reference discloses polyethersulfone compositions comprising structural units derived from bisphenol A and a biphenol. There is, however, no teaching or suggestion in the Keitoku reference with respect to the unique compositions of the instant invention. As noted above and as supported by data in the Applicants' Table 1, the compositions of the instant invention represent a unique and useful subgenus of polyethersulfones, a hitherto unknown subgenus until its discovery by the Applicants.

The Savariar reference discloses polyethersulfones comprising structural units derived from 4,4'-biphenol, one or more other bishydroxyl aromatic compounds (such as 4,4'-dihydroxydiphenyl sulfone, and bisphenol A) and dihalodiarylsulfones (such as 4,4'-dichlorodiphenylsulfone or 4,4'-difluorodiphenylsulfone). Here again, the Savariar reference neither discloses nor suggests the unique subgenus of polyethersulfones claimed by the Applicants.

In view of the foregoing the Applicants respectfully request that the rejection of claims 1, 4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 19, and 20 under 35 U.S.C. 103(a) be withdrawn.

Claim 6 was further rejected as being unpatentable over the Cotter reference, GB 1264900, the Keitoku reference, and the Savariar reference, in view of US Patent 4,959,454 (hereinafter referred to as "the Fukuyama reference"). This rejection is respectfully traversed. Claim 6 is dependent upon claim 1 which recites a

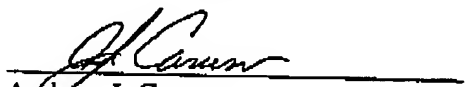
> polyethersulfone composition comprising structural units derived from a monomer mixture comprising bisphenol A and 4,4'-biphenol present in a range of from about 70 mole percent to about 80 mole percent based on total moles of diphenolic monomers, wherein the polyethersulfone has a minimum weight average molecular weight (M_w) of 54,000.

As pointed out, the claimed compositions represent a unique subgenus of polyethersulfones bounded by limitations on both the composition and the molecular weight of the polyethersulfone. These limitations, and the unexpected beneficial properties of the claimed compositions themselves, are neither disclosed nor suggested by any of the references cited, either alone or in combination. The Applicants urge that

claim 1 recites patentable subject matter over the cited references and note that because claim 6 ultimately depends from claim 1 it also necessarily recites patentable subject matter. The Applicants therefore respectfully request that the rejection of claim 6 under 35 U.S.C. 103(a) as being unpatentable over the Cotter reference, GB 1264900, the Keitoku reference, and the Savariar reference in view of the Fukuyama reference be withdrawn.

In view of the foregoing amendment and arguments, the Applicant believes that each of claims 1, 4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 19, and 20 is now in condition for allowance. The Applicant thus courteously solicits a review of the proposed amendment and prompt allowance of these claims. Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact the Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



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